

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

New Claim 8 recites that the oxygen enriched air is a mixture of air and pure oxygen. Basis for this is found at the last three lines of page 9.

Claims 1, 6 and 7 were rejected under 35 U.S.C. §102 as being anticipated by U.S. patent 7,032,526 (Tetsumoto et al). This rejection, however, is respectfully traversed.

As previously explained, the present invention is based on the recognition that a higher oxygen content in the oxidant supplied to the primary burners would create a higher flame temperature and NO_x content (see specification, pages 11-12), whereas a lower oxygen concentration in the primary combustion air limits the flame temperature and NO_x produced by the primary burners. Claim 1 thus recites that the secondary combustion air is oxygen-enriched air, and the oxygen concentration in the primary combustion air is controlled to be lower than the oxygen concentration in the secondary combustion air.

Tetsumoto et al discloses a method of treating combustible waste in a rotary hearth furnace using heat generated by burners 4. Oxidizing gas supply devices 9 supply air which permits secondary combustion of combustible gases generated from the thermal decomposition of the treated waste. Alternatively, secondary burners can be supplied with excessive air so that the excess air can combust the combustible gases generated from the thermal decomposition of the treated waste. Presumably, this means that the volume of air per unit of fuel supplied to the secondary burners is greater than that supplied to the primary burners 4. But there is no evidence that the proportion of oxygen in the air is altered thereby.

The Office Action states that the recitations of “oxygen-enriched air” or “oxygen concentration” in Claim 1 are interpreted to include the excessive air supplied to the secondary burners in Tetsumoto et al. However it is respectfully submitted that this interpretation is not consistent with the broadest reasonable interpretation of the claims.

The examiner is entitled to give the claim terms their broadest reasonable interpretation. However, this simply means that they are given their plain meaning as understood by one skilled in the art. MPEP § 2111.01. The definition of “enrich” is to “add or increase the proportion of a desirable ingredient.” *Merriam Webster’s Collegiate Dictionary*, 10th ed. There is no evidence that this dictionary definition is different from the plain meaning of “enrich” which would be understood by one skilled in the art. Thus the plain meaning of “oxygen-enriched air” is air whose proportion of oxygen has been increased. Plainly, this requires an increase in the proportion of oxygen in any given volume of air, and not simply more oxygen due to a greater volume of air.

The term “oxygen-enriched air” in Claim 1 has been interpreted to include the excessive volume of air supplied to the secondary burners in Tetsumoto et al. That is, because a greater volume of air is supplied in the “excessive air,” an accompanying greater volume of oxygen is also supplied with the greater volume of air. However, this greater volume of air is not “oxygen-enriched air” since the proportion of oxygen in any given volume of air is not increased. Thus the interpretation of “oxygen-enriched air” to mean an excessive volume of air supplied to the secondary burners is inconsistent with the plain meaning of this term and cannot be justified as the broadest reasonable interpretation thereof.

Similarly, Claim 1 recites that the oxygen *concentration* in the primary combustion air is controlled to be lower than the oxygen *concentration* in the secondary combustion air. Here again the description of excessive air cannot be deemed to teach a change in the “concentration” of oxygen in the air, because the plain meaning of “concentration” also refers to the amount per unit volume. *Id.* The amount of oxygen per unit of volume of the excessive air is the same as in the case where the air is not supplied in excess. Thus, here again, the interpretation of the claim term to mean an excessive volume of air supplied to the

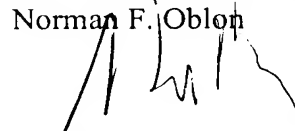
secondary burners is inconsistent with the plain meaning of this term and cannot be justified as the broadest reasonable interpretation thereof.

In any case, new Claim 8 recites that the oxygen enriched air comprises a mixture of air and pure oxygen. The supply of an excessive volume of air to the secondary burners of Tetsumoto et al is not a mixture of air and pure oxygen. Claim 8 thus defines over the prior art.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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